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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/037,987 | 01/04/2002 | Murali Rajagopalan | B01-30 | 7852 |

40990 7590 05/17/2004

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EXAMINER

BUTTNER, DAVID J

| ART UNIT | PAPER NUMBER |
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1712

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|---|--------------------------------------|---|--|
| <p style="text-align: center;">Office Action Summary</p> | Application No. 10/037,987 | Applicant(s) RAJAGOPALAN ET AL. | |
| | Examiner David Buttner | Art Unit 1712 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 2-9, 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 10-13, 16-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____ | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: ____ |
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Election of ZnO particles is acknowledged. Claims 1, 10-13 and 16-37 read on the election.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 16-19 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Shira '666 Patent.

Shira adds nanoparticles such as hafnium oxide and tungsten (example 1) to golf ball covers. The golf ball can have multiple layers (col. 1 line 51). In a three layer ball, the middle layer can be considered an outer core, the mantle or an inner cover. It is merely a matter of choice which designation is selected.

Claims 1, 10, 11, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Majumdar 2003/0100656 Publication.

Majumdar (abstract) discloses blends of polyetheramide and clay. The clay (paragraph 32) is of submicron size. The composition is useful in golf balls (paragraph 73).

Majumdar does not describe the golf ball as having a core and cover, but this arrangement is the most common structure for commercial golf balls. It would have been obvious to employ Majumdar's composition in two piece golf balls.

Claims 1, 10 and 16 rejected under 35 U.S.C. 102(b) as being anticipated by Kent '231.

Kent exemplifies (#1) adding submicron size silica to polyisoprene. The composition is used as a golf ball cover (col. 5 line 11).

Claims 1, 10, 16, 28, and 35-37 are rejected under 35 U.S.C. 102(b) as being the Kamata '810 Patent.

Kamata exemplifies golf ball cores having calcium carbonate. The size of the calcium carbonate is 0.035 – 0.010 microns (abstract).

Claims 1, 10, 12, 13, 16-20 and 28-37 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the J11244419 Patent.

The reference is believed to exemplify (page 7) multilayer golf balls having 0.4 micron ZnO in the inner core or alternatively in the outer core. The cover can be polyurethane (paragraph 32), have multiple layers (paragraph 33), have a shore D of 45-65 (paragraph 33) and have an overall compression of 2.6-3.8 mm under 100 kg (paragraph 35). This compression inherently corresponds to applicant's ATTI

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compression (see figure 7 correlation in Science and Golf IV). The amount of ZnO can be as low as 5 parts (paragraph23).

Claims 1, 10, 12, 13, 16-21 and 28-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over the J11244419 Patent in view of WO 01/43832.

J'419 suggests polyurethane covers, but does not teach saturated polyurethanes. Saturated (ie nonaromatic) polyurethanes are more UV stable than aromatic polyurethanes (page 1 line 9 of WO 01/43832).

It would have been obvious to choose a saturated urethane for J '419's cover for superior UV stability.

Claims 1, 10, 12, 13, 16-20 and 22-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over the J11244419 patent in view of Herbert '172.

J11244419 suggests multilayer covers but does not provide thickness or hardness details.

Herbert (col. 5 lines 27-40) describes such inner cover properties contribute to the balls low spin and distance.

It would have been obvious to ensure the suggested multilayer cover of J11244419 has the thickness/hardness taught by Herbert for the expected advantages.

Claims 1, 10, 11, 16-20 and 22-37 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Cavallaro 2001/0024982 Publication.

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Cavallaro teaches multilayered golf balls having a thermosett urethane cover (see example, paragraph 122). Fillers such as nanoparticles (paragraph 110) may be added.

Although Cavallaro doesn't describe the makeup of the nanoparticle, applicant's claim to "organic, inorganic or metallic" appears to encompass all possibilities. Any nanoparticle selected for use in Cavallaro's ball would inherently meet the claims.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 10, 12, 13, and 16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 16-23 of U.S. Patent No. 6710114. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patent also claims nanoparticles with polybutadiene in golf balls. It is clear that the patent intends to encompass nano ZnO in small quantities (col. 7 line 25-32).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is (571) 272-1084. The examiner can normally be reached on Weekdays from 10:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAVID J. BUTTNER
PRIMARY EXAMINER

D. Buttner/af
May 13, 2004

